Notice of Allowability	Application No.	Applicant(s)	
	10/516,720	HANSCH ET AL.	
	Examiner	Art Unit	
	Erica E. Cadugan	3722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *docket no. H0075.70101US00 filed 6/24/05 and interview of 10/11/07*.

2. ☒ The allowed claim(s) is/are *1-12*.

3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☒ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 6/24/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. William McClellan on October 11, 2007.

The application has been amended as follows:

In the specification on page 2, the fourth paragraph has been amended as follows:

This object is achieved with a device having [the features of claim 1] a spindle mounted at a first end of a pivoting arm so as to be linearly displaceable in a direction parallel to the axis of rotation of the spindle, and a console, on which the pivoting arm is mounted at its second end so as to be rotatable about an axis parallel to the rotation axis of the spindle, wherein the console is displaceable in a Y-direction which is perpendicular to the displacement direction of the spindle in all of the pivoting positions of the pivoting arm.

Claim 1 (Currently Amended). Device for machining a workpiece[s], [especially] for chip removing machining, comprising:

a spindle, mounted at a first end of a pivoting arm so as to be linearly displaceable along the pivoting arm in a direction parallel to the axis of rotation of the spindle;

a console, on which the pivoting arm is mounted at its second end so as to be rotatable about an axis parallel to the rotation axis of the spindle via a circular direct drive, with the

console being displaceable in a Y-direction which is perpendicular to the displacement direction of the spindle in all of the pivoting positions of the pivoting arm.

2 (Original). The device according to claim 1, wherein the console can be displaced in the vertical direction and the pivoting arm can be pivoted about a horizontal axis.

3 (Original). The device according to claim 1, wherein two guide rails are provided for linear displacement of the console in the Y-direction.

4 (Original). The device according to claim 1, wherein the console is designed plate-shaped and the pivoting arm is articulated in a central region of the plate surface.

5 (Original). The device according to claim 3, wherein the guide rails are arranged in edge regions of the plate-shaped console.

6 (Currently Amended). The device according to claim 1, wherein the pivoting arm is attached to the console by means of [a] the circular direct drive[, in particular a direct drive, is provided as the drive for the pivoting movement of the pivoting arm].

7 (Original). The device according to claim 1, wherein a linear direct drive is provided as the drive for the displacement movement of the spindle on the first end of the pivoting arm and/or for the displacement movement of the console (20).

8 (Original). Device according to claim 4 wherein the plate-shaped console has an aperture or a recess, through which the spindle projects.

9 (Original). Machine arrangement comprising a device according to claim 1 and a rotary table for clamping the workpiece.

10 (Original). The machine arrangement according to claim 9, wherein the rotary table has a rotary axis parallel to the displacement direction of the console.

11 (Currently Amended). [The machine] Machine arrangement [according to claim 9,] comprising [including a further] two of the devices according to claim 1, and also including a rotary table for clamping the workpiece, whereby the rotary table is arranged between the [first and second] two devices and the spindles of the two devices are oriented towards each other.

12 (Original). The machine arrangement according to claim 11, including a second rotary table, whereby both rotary tables lie between the devices.

2. The following is an examiner's statement of reasons for allowance:

Firstly, U.S. Pat. No. 6,582,168 to Hogl et al. (or the published U.S. application of the '168 patent US 2001/0006595, or DE 19963342, which is in the same patent family as the Hogl patent) teaches a machine tool.

For purposes of an explanation of the teachings of Hogl, Examiner will refer to column and line numbers based on the US Pat. No. 6,582,168.

Specifically, Hogl teaches a machine tool for machining workpieces including a tool spindle 4 mounted at a "first" end of a "pivoting arm" 2 (Figure 3) so as to be linearly displaceable in the labeled Z direction, which is parallel to the axis of rotation of the tool spindle (see at least col. 7, lines 55-62 and col. 8, lines 45-47, for example, as well as Figures 1-3). Additionally, Hogl teaches a "console" 6 on which pivoting arm 2 is mounted at the end opposite the tool spindle 4 so as to be rotatable about an axis (at base joint 60) that is parallel to the rotation axis of the spindle 4 (see Figures 1 and 3, for example). The "console" 6 is considered to be "plate-shaped" (see Figure 3, re claim 4) and is displaceable along a pair of guide rails 12 (re claim 3) that are located at the edge regions (re claim 5) of the console 6 (see Figures 1 and 3, for example). Note that this displacement of the "console" 6 along the guide rails 12 is in a

direction (thus considered the claimed "Y-direction") that is "perpendicular" to the displacement of the tool spindle in the direction of the axis of spindle 4 (see Figure 3).

However, it is noted that the pivoting arm 2 is not mounted at its second (lower with respect to Figure 3) end so as to be rotatable about an axis parallel to the rotation axis of the spindle "via a circular direct drive" as set forth in independent claim 1. Instead, the rotation of the pivoting arm 2 at its lower end about an axis parallel to the rotation axis is caused by linearly driving the console 6 and another console 5 in a plane 11 along guide rails 12 (see Figures 1-3 and at least col. 2, line 53 through col. 3, line 26, for example), rather than using a "circular" direct drive to mount the pivoting arm 2 to the console 6.

Also, there is no combinable teaching in the prior art of record that would reasonably and absent impermissible hindsight motivate one having ordinary skill in the art to so modify the teachings of Hogl (i.e., to change the principle of operation by replacing a linear drive with a differently configured and located circular drive), and thus, for at least the foregoing reasoning, Hogl does not render obvious the present invention as set forth in independent claim 1.

Also, regarding U.S. Pat. No. 5,664,308 to Deitert, Deitert teaches a machining device including a spindle mounted at a first end of a pivoting arm as shown in the labeled reproduction of Figure 2 below.

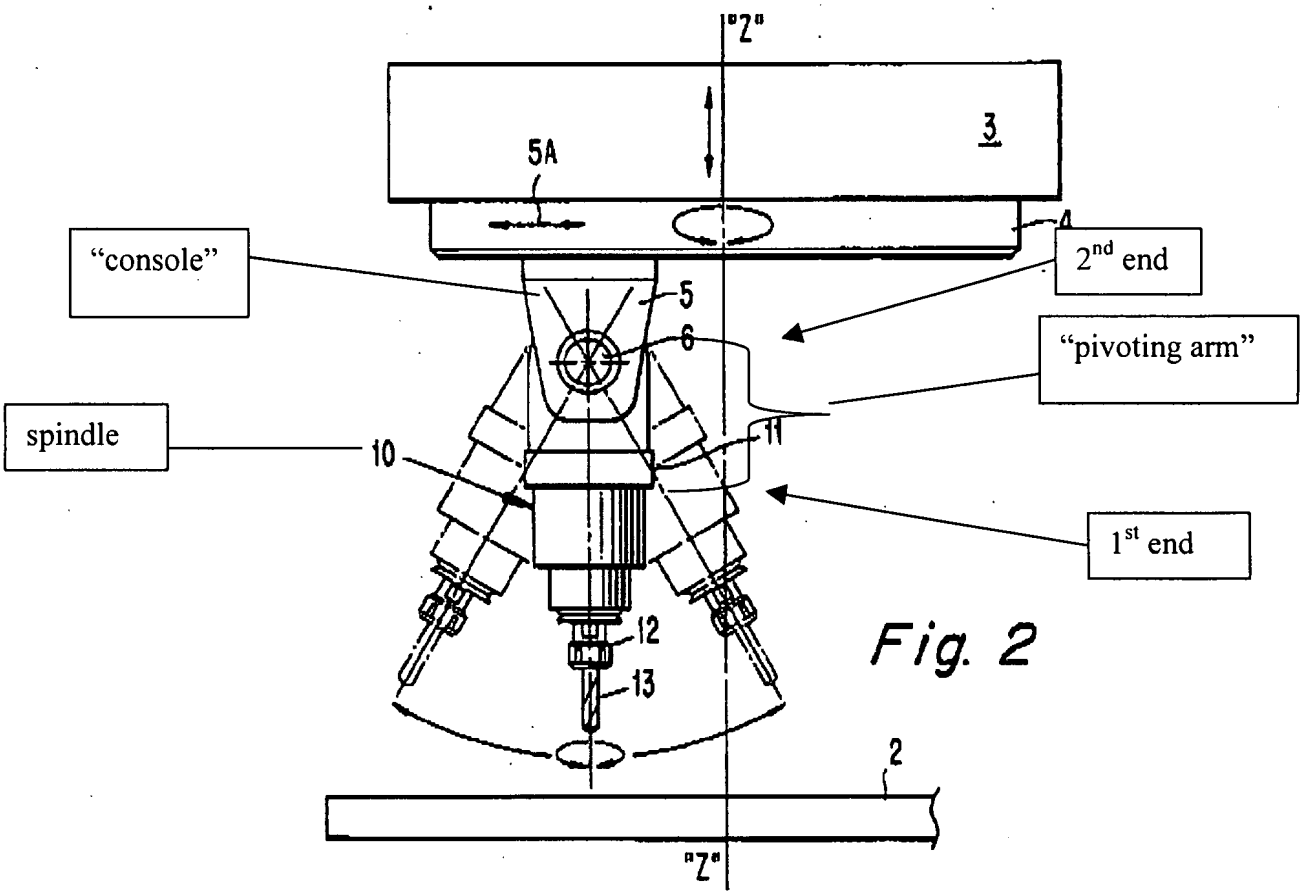

Fig. 2

Note also that the spindle (by virtue of its mounted position on the structure 3, etc.) is linearly movable in the vertical Z-direction shown above (see at least Figure 2 and col. 3, line 57 through col. 4, line 1, for example). Note that the vertical Z-direction is "parallel to the axis of rotation of the spindle" at least when the spindle is in the middle position shown in solid lines in Figure 2.

Additionally, the "pivoting arm" is mounted at its second end (labeled above) on the "console" in a position that enables the pivoting arm to be rotated about the vertical Z-axis shown in Figure 2, which axis is parallel to the vertical axis of rotation of the spindle when the spindle is in the middle position in solid lines shown in Figure 2.

Also, the "console" is displaceable in direction 5A shown in Figure 2 (see also Figure 1), which direction is perpendicular to the vertical Z-displacement direction of the spindle shown above (and direction 5A is perpendicular to direction Z no matter what pivoted position the pivoting arm is in).

Note that the "console", by virtue of its location on element 3, etc., is displaceable in the vertical Z direction described previously, and that the pivoting arm can be pivoted about a horizontal axis (via support shaft 6, described previously), see at least Figure 2.

However, Deitert teaches that the pivoting arm is mounted on the console at the second end of the pivoting arm via a circular drive involving gearing (see 14.1 and 6.1 in Figure 4) rather than a circular "direct" drive as set forth in claim 1.

However, even assuming *arguendo* that it would have been obvious to one having ordinary skill in the art at the time the invention was made to have substituted a "circular direct drive" for the circular drive including motor 14 and gearing 14.1 and 6.1 (Figure 4), the present invention as set forth in independent claim 1 would still not result, noting that the spindle 10 is not mounted at a first end of the pivoting arm so as to be linearly displaceable "along the pivoting arm" in a direction parallel to the axis of rotation of the spindle as set forth in independent claim 1.

Also, there is no combinable teaching in the prior art of record that would reasonably and absent impermissible hindsight motivate one having ordinary skill in the art to so modify the teachings of Deitert (such that the spindle was mounted at the first end of the pivoting arm "so as to be linearly displaceable along the pivoting arm in a direction parallel to the axis of rotation of

the spindle" as set forth in claim 1), and thus, for at least the foregoing reasoning, Deitert does not render obvious the present invention as set forth in independent claim 1.

The aforedescribed prior art being representative of the closest prior art of record, for at least the foregoing reasoning, the prior art of record neither anticipates nor renders obvious the present invention as set forth in independent claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erica E. Cadugan whose telephone number is (571) 272-4474. The examiner can normally be reached on M-F, 6:30 a.m. to 4:00 p.m., alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Monica S. Carter can be reached on (571) 272-4475. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erica E Cadugan
Primary Examiner
Art Unit 3722

eec
October 11, 2007